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Mediterranean plant germination reports – 2

edited by Sara Magrini & Cristina Salmeri

Abstract

Magrini, S. & Salmeri, C. S. (eds): Mediterranean plant germination reports – 2. — Fl. Medit. 30: 391-437. 2020. — ISSN: 1120-4052 printed, 2240-4538 online.

This is the second issue of the series of germination reports from Mediterranean areas (sensu Med-Checklist). It comprises germination protocols for 23 taxa: *Neotinea* from Greece by S. Oikonomidis & al. (No. 23); *Berardia*, *Potentilla*, *Silene*, and *Tephroseris* from North Italy by V. Carasso & al. (Nos. 24-27); *Aethionema*, *Arenaria*, *Iberis*, and *Odontarrhena* from Sicily by F. Carruggio & al. (Nos. 28-31); *Astragalus*, *Erysimum*, *Senecio*, *Silene*, and *Tanacetum* from Sicily by C. Salmeri & M. Castrogiovanni (Nos. 32-36); *Onopordum* from central Italy by S. Zitti & al. (No. 37); *Viola* from central Italy and Sicily by S. Magrini & L. Zucconi (Nos. 38-41); *Hieracium* and *Pilosella* from Sicily and South Italy by E. Di Gristina & al. (Nos. 42-45).

Editorial

This second issue of the series of germination reports from Mediterranean areas (sensu Med-Checklist) comprises seven contributions reporting germination protocols for 23 taxa from Greece, Italy, and Sicily, including 14 endemics. In particular, first germination data for 18 taxa are here reported.

In the first report, Oikonomidis & al. (2020, No. 23) successfully tested several media to improve asymbiotic germination performance in seeds of *Neotinea maculata* (Desf.) Stearn (*Orchidaceae*).

Other five contributions are focused on mountain plants, reporting germination protocols for a total of 18 taxa from Alpine and Mediterranean mountains, most of them endemics. The authors tested the effect of various pre-treatments, like cold stratification, scarification, the addition of gibberellic acid, different temperatures and different photoperiods on germination. In particular, Carasso & al. (2020, Nos. 24-27) reported germination data for four species from North Italy, endemic to the Western Alps, using cold stratification or scarification for dormancy-breaking of: *Berardia lanuginosa* (Lam.) Fiori & Paol. (*Asteraceae*), *Potentilla valderia* L. (*Rosaceae*), *Silene cordifolia*

All. (*Caryophyllaceae*), and *Tephroseris balbisiana* (DC.) Holub (*Asteraceae*). Cold stratification and gibberellic acid were used by Zitti & al. (2020, No. 37) to break physiological dormancy in *Onopordum tauricum* Willd. (*Asteraceae*) from central Italy. Three studies focused on the effects that changes in temperature and photoperiod have on seed germination. Best germination protocols for four pioneer taxa from the Madonie Massif (Sicily) are provided by Carruggio & al. (2020, Nos. 28-31) who tested six different constant temperatures (from 5 to 30°C), both in light/dark and darkness, without pre-treatments: *Aethionema saxatile* (L.) R.Br. subsp. *saxatile* (*Brassicaceae*), *Arenaria grandiflora* L. subsp. *grandiflora* (*Caryophyllaceae*), *Iberis violacea* R.Br. (*Brassicaceae*), and *Odontarrhena nebrodensis* (Tineo) L. Cecchi & Selvi (*Brassicaceae*), endemic to the Madonie Massif. Salmeri & Castrogiovanni (2020, Nos. 32-36) focused on the germination ability of five Sicilian endemics from Mt. Etna (Sicily), using different pre-treatments, like manual/chemical scarification and hydro-priming, and testing four temperatures (from 10 to 25°C), both in light/dark and darkness: *Astragalus siculus* Biv. (*Fabaceae*), *Erysimum etnense* Jord. (*Brassicaceae*), *Senecio squalidus* L. subsp. *aetnensis* (DC.) Greuter (*Asteraceae*), *Silene italica* subsp. *sicula* (Ucria) Jeanm. (*Caryophyllaceae*), and *Tanacetum vulgare* subsp. *siculum* (Guss.) Raimondo & Spadaro (*Asteraceae*). Di Gristina & al. (2020, Nos. 42-45) tested the effect on germination of gibberellic acid and of three constant temperatures (15, 20, 25°C) and alternating temperature (25/15°C) in four endemic *Asteraceae* taxa from mountains of Sicily and South Italy: *Hieracium hypochoeroides* subsp. *cilentanum* Di Grist., Gottschl. & Raimondo, endemic to Mt Cervati (Campania, South Italy), *H. schmidtii* subsp. *nebrodense* (Lojac.) Di Grist., Gottschl. & Raimondo, endemic to the Madonie Mountains, *H. terraccianoi* Di Grist., Gottschl. & Raimondo, endemic to the Pollino Massif, and *Pilosella hoppeana* subsp. *sicula* Di Grist., Gottschl. & Raimondo, endemic to the Madonie and Nebrodi Mountains.

In the last contribution by Magrini & Zucconi (2020, Nos. 38-41), cold stratification, seed hydro- and hormo-priming, and gibberellic acid were used for dormancy-breaking in four species of *Viola* sect. *Melanium* (*Violaceae*) from central Italy and Sicily: *Viola arvensis* Murray subsp. *arvensis*, *V. hymettia* Boiss. & Heldr., *V. kitaibeliana* Schult., and *V. tricolor* L. subsp. *tricolor*.

The "Mediterranean plant germination reports" column could surely become a useful tool for researchers, conservationists, botanists, and other specialists, providing species-specific information on the pre-treatments and key factors to enhance germination of native seeds. Moreover, these germination data will flow into an online, open-access database managed by RIBES association in order to make them available to a wider audience.

For the preparation of the manuscript, please, follow the general instructions for authors of Flora Mediterranea (http://www.herbmedit.org/guide.html) and the specific instructions for the Mediterranean plant germination reports (Magrini & Salmeri 2019; https://www.herbmedit.org/flora/FL29_269-271.pdf). Authors are invited to submit their manuscript in English to one of the editors.

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